Application No. 10/672,585 Response and Amendment dated July 11, 2006 Reply to Office Action dated January 11, 2006

Amendments to the Claims

The following listing of claims shall replace all prior versions, or listings of claims in this application.

Listing of Claims:

1. (Currently Amended) A method for the preparation of 2'- or 3'-deoxy- and 2',3'-dideoxy-β-L-pentofuranonucleoside compounds of formula I:

$$R_1$$
 R_2
 R_3
 R_3
 R_3

in which

- B represents purine or pyrimidine base;
- R₁ represents OH;
- R₂ and R₃ represent, independently of each other, H or OH; and
- at least one of R₂ and R₃ represents H;

characterized in that the following steps are carried out:

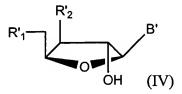
1) a compound of formula (II) is condensed with the base B in order to obtain the compound of formula (III) according to the scheme

in which formulae (II) and (III):

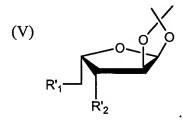
- R'₁ and R'₂ have the meanings given for R_1 and R_2 except that when R_1 and R_2 represent OH, the OH group is protected by a protecting group such as selected from the group consisting of an acyl, a benzyl or a silyl group,
- R'3 represents a C1 to C5 alkyl group or a phenyl radical, which are optionally substituted,
- X is a leaving group such as Cl, Br, I or a C₁ to C₅ acyloxy or alkoxy group,
- B' is a purine or pyrimidine base B which is optionally appropriately protected,

Application No. 10/672,585 Response and Amendment dated July 11, 2006 Reply to Office Action dated January 11, 2006

2) the R'₃COO group at the 2' position is removed by deacetylation so as to obtain an OH group and a compound of formula



- 3) optionally, the OH group at the 2' position is removed by a deoxygenation reaction; and
- 4) where appropriate, the R'₁ and R'₂ groups and the B' base are deprotected so as to obtain the compounds of formula (I).
- 2. (Previously Presented) The method according to Claim 1, characterized in that in the compounds (II) and (III), R'₃ represents a C₁ to C₅ alkyl group.
- 3. (Currently Amended) The method according to Claims 1 or 2, <u>further comprising</u> <u>preparing characterized in that</u> the compound (II), in which X and R'₃COO represent an Oacetyl group, is <u>prepared</u> by acetolysis of a 1,2-isopropylid-ene-L-xylofuranose compound of formula (V)



- 4. (Currently Amended) The method according to Claim 1, characterized in that R'₂ and R'₃COO are different, in particular R'₂ is an O benzoyl group and R'₃ is an alkyl group.
- 5. (Previously Presented) The method according to Claim 1, characterized in that the compounds of formula (I) are prepared in which R₂ and R₃ represent H or OH.
- 6. (Previously Presented) The method according to Claim 1, characterized in that the B represents one of the adenine, guanine, hypoxanthine, uracil, thymine or cytosine bases, wherein these bases may be substituted by a halogen at the 5 position for cytosine and uracil.
- 7. (Currently Amended) The method according to claim 1 for the preparation of a compound of formula (I) in which B is cytosine, <u>further comprising a step wherein characterized in that a compound in which B is uracil is converted to a compound of Formula I in which B is cytosine by converting uracil to cytosine.</u>

Application No. 10/672,585 Response and Amendment dated July 11, 2006 Reply to Office Action dated January 11, 2006

8. (Currently Amended) A stereoisomeric β-L-pentofuranonucleoside compound[[s]] corresponding to the following formula

$$R_1$$
 R_3
 R_3
 R_3
 R_3
 R_3
 R_3
 R_3
 R_3
 R_3

in which

- B has the meaning given in one of Claims 1 and 6-represents one of the uracil, thymine or cytosine bases, wherein these bases may be substituted by a halogen at the 5 position for cytosine and uracil, R₁ represents OH and,
 - either R₂ represents OH and R₃ represents H,
 - or R₂ represents H and R₃ represents OH.
- 9. (Currently Amended) The compound according to Claim 78, characterized in that wherein B represents uracil, 5-fluorouracil, hypoxanthine, cytosine or 5-fluorocytosine, guanine or adenine.
- 10 16. (Canceled)
- 17. (Previously Presented) The method according to Claim 1, characterized in that in the compounds (II) and (III), R'₃ represents CH₃.